

# Exhibit A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Wachendorff-Neumann *et al.*

Appl. No.: 10/573,066

§ 371 (c) Date: October 24, 2006

For: **Synergistic Fungicidal Active Sub-  
stance Combinations**

Confirmation No.: 6965

Art Unit. 1627

Examiner: Pihonak, Sarah

Atty. Docket: 2400 0230000/RWE/PDL

**Declaration of Peter Dahmen Under 37 C.F.R. §1.132**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

I, Peter Dahmen, of Altebrücker Str. 61, 41470 Neuss, Germany, a citizen  
of Germany, hereby declare:

1. I received the degree of Dr. agr. from the University of Bonn, Germany;
2. that I entered the employment of Bayer AG in 1991 and am now employed by Bayer CropScience AG;
3. that I am now working in the department of Global Biology Fungicides, Bayer CropScience AG;
4. that I have specialized in the field of fungicide research;
5. that I am named as an inventor in U.S. Patent Application No. 10/573,066 ("Application"), which has been assigned to Bayer CropScience AG;
6. that I have read and understand the specification and claims of the Application;
7. that (1-1) bixafen (recited in the Application on page 41, line 16, as *N*-(3',4'-dichloro-5-fluoro-1,1'-biphenyl-2-yl)-3-(difluoromethyl)-1-methyl-1*H*-pyrazole-

4-carboxamide), (3-15) prothioconazole, and (3-17) tebuconazole, described in the Application, were tested as described in the Example below;

8 that the Example below, entitled "Septoria tritici-test (wheat) / preventive" was carried out under my supervision and direction;

9. that the expected activity for a given combination of two active compounds can be calculated as follows (cf. Colby, S.R., "Calculating Synergistic and Antagonistic Responses of Herbicide Combinations," *Weeds* 1967, 15, 20-22):

If

X is the efficacy when active compound A is applied at an application rate of m ppm (or g/ha),

Y is the efficacy when active compound B is applied at an application rate of n ppm (or g/ha),

E is the efficacy when the active compounds A and B are applied at application rates of m and n ppm (or g/ha), respectively, and

then

$$E = X + Y - \frac{X \cdot Y}{100} ;$$

10. that the degree of efficacy, expressed in % is denoted: 0 % means an efficacy which corresponds to that of the control while an efficacy of 100 % means that no disease is observed; and

11. that if the actual fungicidal activity exceeds the calculated value, then the activity of the combination is superadditive, i.e. a synergistic effect exists

12. Example: *Septoria tritici*-test (wheat) / preventive

Solvent:	7 parts by weight dimethylformamide
Emulsifier:	2 parts by weight alkylaryl polyglycoether

To produce a suitable preparation of active compound, 1 part by weight of active compound or active compound combination is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration. To test for preventive activity, young plants are sprayed with the preparation of active compound or active compound combination at the stated rate of application. After the spray coating has been dried, the plants are sprayed with a spore suspension of *Septoria tritici*. The plants remain for 48 hours in an incubation cabinet at approximately 20°C and a relative atmospheric humidity of approximately 100% and afterwards for 60 hours at approximately 15°C in a translucent incubation cabinet at a relative atmospheric humidity of approximately 100%. The plants are placed in the greenhouse at a temperature of approximately 15°C and a relative atmospheric humidity of approximately 80%. The test is evaluated 21 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control, while an efficacy of 100% means that no disease is observed. The table below clearly shows that the observed activity of the active compound combination according to the invention is greater than the calculated activity, i.e. a synergistic effect is present.

Table**Septoria tritici-test (wheat) / preventive**

Active compounds	Application rate of active compound in ppm a.i.	Efficacy in %	
		found*	calc.**
(1-1) Bixafen	10	0	
(3-15) Prothioconazole	100	57	
(3-17) Tebuconazole	100	57	
(1-1) + (3-15) 1:10	10 + 100	71	57
(1-1) + (3-17) 1:10	10 + 100	86	57

\* found = activity found

\*\* calc. = activity calculated using Colby's formula

13 The undersigned declares further that all statements made herein of his/her own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at Monheim, Germany,

2010-12-13

Date

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Signature